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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,113	12/16/2003	Robert E. Briley	17006-14	5494

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EXAMINER	
KRUER, KEVIN R	

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/737,113	BRILEY, ROBERT E.	
	Examiner	Art Unit	
	Kevin R. Kruer	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-13,15,16 and 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-13,15,16,and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keener (US 6,403,230) in view of Kishikawa et al (2002/0029826) and Kaneko et al (US 4,421,789).

Keener teaches a method of masking an aluminum fastener prepared by providing an aluminum alloy article precursor that is not in its final heat treated state and providing a curable organic coating thereon (abstract). The fastener may be a rivet (col 4, line 31). With regard to the newly added "heat treated" limitations, Keener teaches the rivet may be heat-treated to increase it shear strength after solution treating/annealing, but prior to the other processing steps (col 4, lines 55+). The fastener is optionally chemically etched, grit blasted or other-wise processed to roughen its surface and thereafter anodized in chromic acid solution (col 5, lines 48+). The curable coating may comprise a phenolic resin, strontium chromate, and a solvent such as ethanol, toluene, or methyl ethyl ketone (col 6, lines 42+). The rivet is used to rivet two workpieces together (Fig 7) while the coating seals the rivet (col 8, lines 9+).

Keener does not explicitly teach the coating should be cured under the claimed conditions while maintaining the temperature of the coating and the heat treated rivets below a maximum temperature of about 300°F. However, Keener teaches that the rivet and the applied coating may be heated together to a suitable temperature in order to

achieve heat aging and curing in a single step (col 7, lines 19+). The temperature and time of said step is selected to be that required to achieve the desired properties. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the time and temperature at which the coating was cured. The motivation for doing so would have been to obtain a rivet with the desired properties.

Keener teaches that the coating provides the rivet with corrosion protection (col 1, lines 49+), but does not teach the claimed thickness of said coating. However, it is known in the art that corrosion protection is proportional to coating thickness. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the coating thickness of the organic coating. The motivation for doing so would have been to optimize corrosion resistance.

Keener does not teach that the coating should contain polyvinyl butyral. However, Kishikawa teaches a surface-treated metal comprising a corrosion inhibitor and a binder, wherein the binder comprises a mixture of polyvinyl butyral with another resin compatible with the butyral resin (abstract), such a phenol (0024). The butyral is very soft and flexible and adapts without difficulty to the changing shape of the metal (000027). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add polyvinyl butyral to the phenolic coating taught in Keener. The motivation for doing so would have been that the polyvinyl butyral would allow the coating to adapt without difficulty to the changing shape of the rivet.

Keener also does not teach that the coating should be washed with chromic acid and a fluorine compound. However, Kaneko teaches a method of improving the

corrosion resistance of an aluminum substrate by subjecting said substrate to a chromating treatment (col 2, lines 34+). Such treatments involve washing the substrate with a solution containing chromic acid and fluorides. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to chromate the surface of the rivet taught in Keener with a solution comprising chromic acid and a fluorine compound. The motivation for doing so would have been to improve its corrosion resistance.

3. Claims 1-6 15, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keener (US 6,403,230) in view of Kishikawa et al (2002/0029826) and Kaneko et al (US 4,421,789), as applied to claims 8-13 above, and further in view of Nonweiler et al (US 5,610,215).

Keener in view of Kishikawa and Kaneko is relied upon as above. Specifically, Keener teaches that the rivet may be grit blasted, but does not teach that the rivet may be grit blasted with aluminum oxide. However, Nonweiler teaches that aluminum oxide is known in the art to be useful for girt blasting aluminum substrates (col 7, lines 7+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilized aluminum oxide to grit blast the rivet taught in Keener. The motivation for doing so would have been that such a process is known in the art.

Response to Arguments

Applicant's arguments filed August 16, 2006 have been fully considered but they are not persuasive.

Applicant argues that Keener and Kishikawa fail to teach, disclose, or suggest washing rivets with a solution containing chromic acid and fluorine compound. Said argument is noted but is not persuasive because Kaneko, not Keener or Kishikawa, is relied upon to teach said washing solution. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that the pretreatment step of the present invention does not form a chromate conversion coating whereas the treatment of Kaneko does form a coating. The examiner initially notes that the claims are not limited to pretreatments that do not form conversion coatings. Furthermore, Allodine is taught in the specification as a suitable pretreatment composition. Said composition is known in the art to form a conversion coating, which makes it analogous to the treatment taught in Kaneko.

For the reasons noted above, the rejections are maintained.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K-R K-

Kevin R. Kruer
Patent Examiner-Art Unit 1773